

**Notice of Allowability**

Application No.

10/693,320

Examiner

Sajous Wesner

Applicant(s)

JAMES, BRIAN G.

Art Unit

2676

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application SN 10/693320 filed on 10/23/2003 with a priority date of 4/13/1999.
2. ☒ The allowed claim(s) is/are 1-17.
3. ☒ The drawings filed on 10/23/2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 2
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## DETAILED ACTION

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Bradley Knepper on September 22, 2004.

The application has been amended as follows: In the Specification, at page 47 line 3, replace "19b" with 18b.

In claim 1 at line 23, after "each" insert —dot maximum—.

Please amend claim 11 in the following manner:

The method of claim 11 where the continuous scaling function has a form  $(x) = a + 10$  and  $DR_{\min} x < x_0$ , where  $DR_{\min}$  is the minimum of the dynamic range and  $f(0)=0$  and  $x_0$  is an anchor strength value intermediate the minimum and the maximum of the dynamic range and  $f(x_0) = x_0$ ; wherein a and b are constant, and x is a dot maximum strength value.

### *Allowable Subject Matter*

2. Claims 1-17 are allowed over the prior art.

### Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance:

The present invention is directed to a method of enhancing digital color images by preserving the color of all dots in the images regardless of how much image brightening is needed or what the nature of that brightening is, hence providing an image with a more pleasing effect.

The best prior art of record, the Levien (US Pat. No. 5,544,258) reference, teaches a method to automatically correct tone values of digitally stored images including compiling a histogram, which is processed by adding a constant, applying a non-linear function to each value, and digital filtering, of the relative occurrence of gray values in the stored image. The processed histogram is integrated and then normalized for a tone correction function. Levien suggests averaging red, green, and blue histogram color planes in order to provide a single composite tone correction function, which is used to correct the tone values for each color planes. The processed histogram is integrated and then normalized for a tone correction function that can be applied to the average histogram of the respective individual color planes. See col. 2, lines 16-45, and col. 3, lines 15-65. However, Levien fails to teach an automatic adjustment of the color of a digital image having color dots with each dot having at least three independent values representing the strength of the three primary colors R, G, and B, each strength value lying between a minimum and a maximum of a dynamic range, the method comprises establishing a corrected average strength

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of the original dot maximum from a corrected histogram of the scaled dot maximums; interpolating a target scaling factor from a target average strength, the corrected average strength and the original average strength for each dot maximum; and creating the adjusted image without color distortion by applying the target scaling factors to each color dot's R, G and B strength values so that a histogram of the adjusted image has the target average strength and that the ratios of the strength values between R, G and B for the color dot remain the same after scaling as they were before scaling (as called for in the claims).

Accordingly, the limitations of claims 1-17 are allowed over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

Any response to this action should be mailed to:

Box

Commissioner of Patents and Trademarks  
Washington, DC 20231

or faxed to:

(703) 308-9051, (for formal communications; please mark

"EXPEDITED                      PROCEDURE")

Or:

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(703) 308-5359 for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-held delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,

Arlington, VA , 6th floor (receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesner Sajous whose telephone number is (703) 308- 5857. The examiner can also be reached on Mondays thru Thursdays and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Matthew Bella, can be reached at (703) 308-6829. The fax phone number for this group is (703) 308-6606.

WS

September 22, 2004

*Matthew C. Bella*

MATTHEW C. BELLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600